Online Companion for

Efficient Portfolios, Sparse Matrices, and Entities: A Retrospective

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1. EDUCATION:

Degree	Institution	Field	Dates
Ph.D.	Univ. of Chicago	Economics	1954
M.A.	Univ. of Chicago	Economics	1950
Ph.B.	Univ. of Chicago	Liberal Arts	1947

2. WORK EXPERIENCE:

President, Harry Markowitz Company, 1984-Present
Director of Research, Daiwa Securities Trust Company, 1990-2000
Marvin Speiser Distinguished Professor of Finance and Economics, Baruch College, 1982-93, (currently, Distinguished Professor, Emeritus)
Visiting Professor, London Business School, 1991 Semester
Visiting Professor, University of Tokyo, 1990-1 Semester
Research Staff Member, IBM, 1974-83
Professor, Rutgers University, 1980-82
Visiting Professor, Hebrew University, 1975 Semester
Consultant, 1972-74
Professor, Wharton, 1972-74
President, Arbitrage Management Co., 1969-72
Professor, UCLA, 1968-69
Chairman of the Board and Technical Director, Consolidated Analysis Centers, Inc., 1963-68
Research Associate, The RAND Corp., 1952-60; 1961-63
Consultant, General Electric, l960-61

3. PUBLICATIONS:

A. Books:

Portfolio Selection: Efficient Diversification of Investments, John Wiley and Sons, 1959, Yale University Press, 1970, Basil Blackwell, 1991.

Mean-Variance Analysis in Portfolio Choice and Capital Markets, Basil Blackwell, New York, 1987, 1989, l990 paperback.

Mean-Variance Analysis in Portfolio Choice and Capital Markets. With Chapter 13 by G. Peter Todd (2000). First published in 1987 by Basil Blackwell. Revised reissue by Frank Fabozzi and Associates, New Hope, PA (2000).

Adverse Deviation by J. Woody with A. Goldstein, B. Markowitz and H. Markowitz, Society of Actuaries, l981.

The EAS-E Programming Language with A.H. Malhotra & D.P. Pazel, IBM Thomas J. Watson Research Center, Yorktown Heights, N.Y., l981.

The Simscript II Programming Language, with P. Kiviat & R. Villanueva, Prentice Hall, l969.

Studies in Process Analysis: Economy-wide Production Capabilities, with A.S. Manne, et al, John Wiley and Sons, l963, published in Russian, 1967.

SIMSCRIPT: A Simulation Programming Language, with B. Hausner & H. Karr, Prentice Hall, l963.

B. Chapters in Books:

"Foreword", Equity Management, Quantitative Analysis for Stock Selection, by Bruce Jacobs and Kenneth Levy, McGraw-Hill, 2000

"Foreword", Investments, by Edwin J. Elton and Martin J. Gruber, Volumes 1 and 2, The MIT Press, 1999.

"Foreword", Capital Ideas and Market Realities by Bruce Jacobs, Blackwell Publishers, 1999.

"Foreword", Insight.xla Business Analysis Software for Microsoft Excel by Sam L. Savage, Duxbury Press, Brooks/Cole Publishing Company, 1998.

"On Socks, Ties and Extended Outcomes", Economic and Environmental Risk and Uncertainty: New Models and Methods, Kluwer Academic Publishers, 1997, pp. 219-226.

"Foreword", Optimal Consumption and Investment with Bankruptcy by Suresh P. Sethi, Kluwer Academic Publishers, 1996.

"New 'Financial Market Equilibrium' Results: Implications for Practical Financial Optimization" in Financial Optimization, Stavros A. Zenios, editor, Cambridge University Press, Cambridge, England, l993.

"Mean-Variance Analysis", The New Palgrave: A Dictionary of Economic Theory and Doctrine, The Macmillan Press Ltd., London, l987.

"Simulator Design and Programming", Computer Performance Modeling Handbook. Steven S. Lavenberg, editor, Academic Press, l983.

"The ER and EAS Formalisms for System Modeling, and the EAS-E Language", with A. Malhotra and D. Pazel in Entity-Relationship Approach to Information Modeling and Analysis, Peter C. Chen, editor, Elsevier Science Publishers, l983.

"Sparsity and Piecewise Linearity in Large Portfolio Optimization Problems", with A. Perold, Sparse Matrices and Their Uses, Iain S. Duff, editor, Academic Press, l981.

"SIMSCRIPT: Past, Present and Some Thoughts About the Future", in Current Issues in Computer Simulation, Nabil R. Adam & Ali Dogramaci, editors, Academic Press, l979.

"SIMSCRIPT", Encyclopedia of Computer Science and Technology, Vol. 13, J. Belzer, A.G. Holzman, A. Kent, editors, Marcel Dekker, Inc., 1979.

"An Algorithm for Finding Undominated Portfolios", Financial Decision Making

Under Uncertainty, H. Levy & M. Sarnat, editors, Academic Press, 1977.

"Industry-wide, Multi-industry and Economy-wide Process Analysis", The Structural Interdependence of the Economy, T. Barna, editor, John Wiley and Sons, l954.

C. Papers in Professional Journals:

"Portfolio Selection", The Journal of Finance, March 1952.

"The Utility of Wealth", Journal of Political Economy, April 1952.

"Concepts and Computing Procedures for Certain X_{ij} Programming Problems", Proceedings of the Second Symposium in Linear Programming, Vol. 2, National Bureau of Standards, 1955.

"The Optimization of a Quadratic Function Subject to Linear Constraints", Naval Research Logistics Quarterly, Vol. III, 1956.

"On the Solution of Discrete Programming Problems", with A.S. Manne, Econometrica, 1957.

"The Elimination Form of the Inverse and Its Application to Linear Programming", Management Science, 1957.

"The Simscript Language", with B. Dimsdale, IBM Systems Journal, Vol. 3, No. 1, l964.

"Simulating with Simscript", Management Science, June 1966.

"The Distribution System Simulator", with M.M. Conners, C. Coray, C.J. Cuccaro, W.K. Green, D.W. Low, Management Science, April 1972.

"Markowitz Revisited", Financial Analysts Journal, Sept./Oct. l976.

"Investment for the Long Run: New Evidence for an Old Rule", The Journal of Finance, December l976.

"Approximating Expected Utility by a Function of Mean and Variance", with H. Levy, American Economic Review, June l979.

"Portfolio Analysis with Factors and Scenarios", with A. Perold, The Journal of Finance, Vol. 36, No. 14, September l981.

"The System Architecture of EAS-E: An Integrated Programming and Data Base Language", with D.P. Pazel & A.H. Malhotra, IBM Systems Journal, Vol. 22, No. 3, 1983.

Nonnegative or Not Nonnegative: A Question About CAPMs", Journal of Finance, Vol. 38, No. 2, May 1983.

"EAS-E: An Integrated Approach to Application Development", with A. Malhotra, D.P. Pazel, ACM Transactions on Database Systems, Vol. 8, No. 4, December l983.

"Mean-Variance Versus Direct Utility Maximization", with H. Levy and Y. Kroll, Journal of finance, Vol. 39, No. 1, March 1984.

"The EAS-E Application Development System: Principles and Language Summary", with A.H. Malhotra, D.P. Pazel, Communications of the ACM, Vol. 27, No. 8, August l984.

"The Two-Beta Trap", The Journal of Portfolio Management, Vol. 11, No. 1, Fall l984.

"Investment Rules, Margin and Market Volatility", with G. Kim, The Journal of Portfolio Management, 16(1), 45-52, Fall, 1989.

An Entity-Relationship Programming Language", with A.H. Malhotra, Y. Tsalalikhin, D.P. Pazel and L.M. Burns, IEEE Transactions on Software Engineering, Vol. 15, No. 9, September l989.

"Risk Adjustment", Journal of Accounting, Auditing and Finance, Conference on Productivity, Vol. 5, Nos. 1/2 (New Series),Winter/Spring l990.

"Normative Portfolio Analysis: Past, Present and Future", Journal of Economics and Business, Special Issue on Portfolio Theory, 42(2), May 1990, pp 99-103.

"Foundations of Portfolio Theory", Journal of Finance, Vol. 46, No. 2, June 1991, pp 469-477 (Nobel Lecture).

"Individual Versus Institutional Investing", Financial Services Review, 1(1), 1991, pp 1-8.

"Fast Computation of Mean-Variance Efficient Sets Using Historical Covariances", with Peter Todd, Ganlin Xu, Yuji Yamane, Journal of Financial Engineering, 1(2), 1992.

"A Theory of Practice", This Week's Citation Classic, Current Contents, 24(36), Social and Behavioral Sciences, September 7, 1992 also Current Contents, 14(19), Arts and Humanities, September 14, l992.

"An Algorithm for Portfolio Selection in a Lognormal Market" with Siegfried Schaible and William T. Ziemba, International Review of Financial Analysis, 1(2), 1992, 109-113.

"L'Histoire de la Finance Moderne", Journal de la Societe de Statistique de Paris, 133(4), 1992, 13-33.

"Trains of Thought", The American Economist, (Journal of the International Honor Society in Economics), 37(1), Spring, 1993, 3-9.

"Computation of Mean-Semivariance Efficient Sets by the Critical Line Algorithm", with P. Todd, G. Xu, Y. Yamane, Annals of Operations Research, Vol. 45(1993), pp 307-317.

"A Comparison of Some Aspects of the U.S. and Japanese Equity Markets", with M. Bloch, J. Guerard, P. Todd, G. Xu, Japan and the World Economy, Vol. 5 (1993), pp. 3-27.

"Analysis and Intuitive Decision Making Models in Business: A Foreword", Mid-Atlantic Journal of Business, Vol. 30, No. 1, March 1994.

"Data Mining Corrections", with Gan Lin Xu, The Journal of Portfolio Management, Vol. 21, No. 1, Fall 1994, pp. 60-69.

"The General Mean-Variance Portfolio Selection Problem", Phil. Trans. R. Soc. Lond. A, Vol. 347, 1994, The Royal Society, pp. 543-549.

"The Value of a Blank Check", with D. Reid and B. Tew, The Journal of Portfolio Management, Vol. 20, No. 4, Summer 1994, pp. 82-91.

"The Likelihood of Various Stock Market Return Distributions; Part 1: Principles of Inference", with Nilufer Usmen, Journal of Risk and Uncertainty, Vol. 13 (1996), pp. 207-219. Kluwer Academic Publishers.

"The Likelihood of Various Stock Market Return Distributions; Part 2: Empirical Results", with Nilufer Usmen, Journal of Risk and Uncertainty, Vol. 13 (1996), pp. 221-247. Kluwer Academic Publishers.

"Deflating Research Expectations", with Gan Lin Xu and Bluford Putnam, Global Investor, September 1996.

"DPOS: The Daiwa Portfolio Optimization System", VBA Journaal, Dertiende jaargang nr. 3, September 1997, pp. 4-7.

"A More Efficient Frontier", with Felix Schirripa and Nan D. Tecotzky, The Journal of Portfolio Management, May 1999, pp. 99-108.

"The Early History of Portfolio Theory: 1600-1960", Financial Analysts Journal, July/August 1999, Vol. 55, No. 4, pp. 5-16

4. PROFESSIONAL HONORS, PRIZES:

Fellow, Econometric Society
Fellow, American Academy of Arts and Sciences, May 1987
ORSA/TIMS Von Neumann Theory Prize, May l989
1990 Nobel Prize in Economic Sciences, December l990
Honorary Doctorate from Universite D'Orleans, 1992
Named "Man of the Century" by editors of *Pensions and Investments*, December 1999
Founders Award from the Mathematical Programming Society, August 2000

5. OFFICES HELD IN PROFESSIONAL SOCIETIES:

Member, Board of Directors, American Finance Association
Director, The Institute of Management Sciences (TIMS)
Former President, American Finance Association
Advisory Board for Financial Mathematics